

### **REMARKS**

By this amendment, Applicant has made minor amendments to Claims 1-5, 7-8, 10-11, 19-20, 15-22, 24, 26-28, 31-33, 35, 38-41 and in order to place these claims in more proper form, and Claims 46-48 are added which reflect information included in the original specification. All of the changes are well supported in the specification and no new matter has been added. Claims 1-48 are currently under examination in the present application. For the reasons set forth below, Applicant submits that the present amendments and arguments place this application in condition for immediate allowance.

In the Official Action, the Examiner objected to Claims 33 and 35 as being improper in form to the multiple dependency, and this objection has been traversed in the present amendments wherein these claims are no longer multiply dependent.

In the Official Action, the Examiner rejected Claims 1-45 on the grounds that these claims were unpatentable on the basis of double patenting over claims 1, 3, 4, 9, 11-15, 19 and 20 of co-pending application Serial No. 11/214,266, and over claims 1-19 of U.S. Patent 6,860,911, although the Examiner conceded that such claims were not identical to the present claims. With regard to the rejection on the basis of double patenting on the basis of U.S. Patent 6,860,911, this rejection is respectfully traversed in that the present claims include compositions including ammonia and ammonia-like compounds, and such claims are thus distinguishable from the claims of U.S. Patent 6,860,911 on this basis. Applicant thus submits that the present claims should not be held to be unpatentable in light of this patent, and that this rejection should be withdrawn.

With regard to the double patenting rejection on the basis of co-pending application Serial No. 11/214,266, the Examiner correctly notes that this is a provisional double patenting rejection because the allegedly conflicting claims have not as yet been patented. Applicant may intend to file a Terminal Disclaimer based on the prosecution of said claims, but no Terminal Disclaimer is required at present since these claims have not been patented and in fact are still pending.

In the Official Action, the Examiner rejected the claims under 35 U.S.C. §112, second paragraph, on the basis of various objections to the claim language and form. Applicant has now reviewed the claim language and has amended the language to place these claims in proper form wherever applicable in conformance with the suggestions of the Examiner. Applicant also submits that the urea in certain of the dependent claims is appropriate since this compound is also known as carbamide and is thus considered to be included as an amide. In addition, the Examiner has indicated that some of the claims read on water (i.e., 100% water). However, in each case, the water in the claims is of a range that is less than 100%, and thus the composition of the claims requires the presence of some components as recited to make up the percentage which is not water. Accordingly, the present claims are proper and are not equivalent to pure water. Applicant thus submits that these rejections are respectfully traversed and should be withdrawn.

In the Office Action, the Examiner rejected Claims 7, 10, 13, 14, 19, 20 and 21 under 35 U.S.C. §102(b) as being anticipated by Stutz US patent 3,281,318. This rejection, insofar as applied to the claims as amended, is respectfully traversed. In particular, as presently amended, the claims have a composition which is not disclosed

or made obvious by the composition in Stutz in that ingredients such as urea and the ammonia-like compounds are not present in the Stutz compositions.

In addition, the present language "consisting essentially of" distinguishes the claims from Stutz in that this language is not met in the cited reference. It is well established that the transitional phrase "consisting essentially of" means that the scope of a claim excludes those specified materials or steps which "materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original). In the present case, the claimed composition includes a chemical change agent for combustion with coal, while Stutz is directed to a composition for treating wood which is a wax emulsion containing a substantial quantity of polychlorophenol or polychlorophenate which are not chemical change agents for combustion with coal. Stutz thus teaches away from the present claims and does not anticipate or make obvious the present claims. Accordingly, the Examiner's rejection of the claims on the basis of this reference is respectfully traversed and should be withdrawn.

In the Office Action, the Examiner rejected Claims 7 and 10 under 35 U.S.C. §102(b) as being anticipated by Groszek US patent 4,183,757. This rejection, insofar as applied to the claims as amended, is respectfully traversed. In particular, as with the rejection on the basis of the Stutz reference discussed above, the ingredients of the present claims 7 and 10 have been amended so as to be distinct from the Groszek reference. For example, Groszek does not have the ingredients as set forth in Claims 7 and 10, such as urea. It is thus clear that the Groszek reference no longer anticipates Claims 7 and 10.

In addition, as set forth above, the present language “consisting essentially of” distinguishes the claims from Groszek in that once again this language is not met in the cited reference. In particular, the claimed composition includes a chemical change agent that has a significant effect on NO<sub>x</sub> when burning with coal, while Groszek disclosed a compound that would be unsuitable for this purpose which would produce a very poor emulsion unlike the present composition of Claims 7 and 10. The compositions of Claims 7 and 10 have a stable and superior emulsion which can thus be used for combustion with coal. Groszek thus teaches away from the present claims and does not anticipate or make obvious the present claims. Accordingly, the Examiner’s rejection of the claims on the basis of this reference is respectfully traversed and should be withdrawn.

In the Office Action, the Examiner rejected Claims 28 and 29 under 35 U.S.C. §102(b) as being anticipated by Franke US patent 4,741,278, and rejected Claims 22, 25, 27 and 30 under 35 U.S.C. §103(a) as being obvious over Franke, despite the fact that the Examiner acknowledged that Franks failed to teach that coal could be combined with an NO<sub>x</sub> reducing agent in the manner of the present invention. As set forth in more detail below, indeed the present claims differ greatly from Franke in that unlike as in Franke, the NO<sub>x</sub> reducing agent of the present claims can be applied to coal directly **without** any prior processing such as crushing and grinding. For this and other reasons, this rejection, insofar as applied to the claims as amended is respectfully traversed for the reasons that follow.

The present invention relates to the provision of a novel NO<sub>x</sub> reducing agent formulated to be applied to a material such as coal directly with or without prior


processing steps such as crushing or grinding, and which operates through the use of agent which causes a chemical change. To the contrary, the Franke reference only discloses a solid carbonaceous fuel (and not a chemical change agent) which uses calcium compounds and a form of iron in an effort to achieve some NO<sub>x</sub> reduction during combustion. By teaching that the only way to obtain NO<sub>x</sub> reduction is through mixing of calcium compounds, iron compounds and finely divided coal or carbonaceous materials, followed by mixing this with a water soluble binding agent and an emulsion, the Franke process is directed to producing pellets that eventually have to be thermally dried and hardened to make a product for combustion. This process would not be feasible in the coal industry because it would require significant processing of the coal which would consume significant amounts of energy which would offset any NO<sub>x</sub> reduction.

To the contrary, the present invention utilizes different materials and can be added to pulverized coals before, during or after grinding and thus avoids all of the costly, time-consuming and energy-wasting steps as taught by the Franke reference. Even further, the removal of water from the pellets in Franke caused by thermal drying and the hardening of the pellets will reduce the effectiveness of any iron oxide added, and once again in any event requires inefficient and costly steps to prepare the pellets in the first place. As a result, the compositions are different in light of the amended claims, and the process of Franke is also very different from the claimed methods and in fact Franke **teaches away** from the present claims. Accordingly, the Examiner's rejection of the claims on the basis of the Franke reference is respectfully traversed and should be withdrawn.

In light of the amendments and arguments provided herewith along with the attached Petition, Applicants submit that the present application overcomes all prior rejections and objections, and has been placed in condition for reinstatement and immediate allowance. Such action is respectfully requested.

Respectfully submitted,

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